

ROKITSKIY, P.F.

Inheritance of characters and selection of farm animals. Biul.
MOIP. Otd.biol. 65 no.3:153-154 My-Je '60. (MIRA 13:7)
(STOCK AND STOCKBREEDING)

ROKITSKIY, Petr Fomich, prof.; SHALKOVSKAYA, A., red.

[Biological statistics] Biologicheskaya statistika.
Minsk, Vysshaya shkola, 1964. 326 p. (MIRA 18:2)

ROKITSKIY, P.F.

Measures for intensifying the biometric training of the
students of biology at the White Russian State University.
Prim. mat. metod. v biol. no.2:18-20 '63. (MIRA 16:11)

ROKITSKIY, F.F.

[English-Russian biological dictionary] Anglo-russkii
biologicheskii slovar', Izd.2. Moskva, Sovetskaya
entsiklopediya, 1965. 680 p. (MIRA 18:10)

ZOFITSKIY, P.F., prof., red.; SENZHANINA, I.N., prof., red.

[Ecology of vertebrates in White Russia] Ekologiya zhivotnykh Belorussii. Minsk, Nauka i tekhnika, 1965. 213 p. (MIRA 18:11)

1. Akademiya nauk BSSR, Minsk. Adizel zoologii i parazitologii.

ROKITSKIY, Ye. I.

Tempering

Tempering inner, small diameter surfaces during high frequency current tempering under water. Vest. mash. 31, No. 12, 1951

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

ROKITSKIY, Ye.I., kand. tekhn. nauk

Electronic potentiometer with a low interference sensitivity.
Priborostroenie no.5:11-13 My '65.

(MIRA 18:5)

ROKITSKIY, Ye.Ye; STAVITSKIY, I.M.

Semiautomatic high-production unit for simultaneous cutting of chamfers
on several holes. Avt.prom. no.9:38-39 S '60. (MIRA 13:9)

1. Moskovskiy avtosavod imeni Likhacheva.
(Machine tools)

S/113/60/000/009/004/005
A002/A001

AUTHORS: Rokitskiy, Ye. Ye., Stavitskiy, I. M.

TITLE: A Highly Efficient Semi-Automatic Device for the Simultaneous Chamfering of Several Holes ✓

PERIODICAL: Avtomobil'naya promyshlennost', 1960, No. 9, pp. 38-39

TEXT: At the Moscow Automobile Plant imeni Likhachev, a semiautomatic universal device with automatic setting is used for the simultaneous chamfering of all holes in a flange located perpendicular to a given plane (e. g. holes in the drive shaft flanges of ZIL automobiles). The device consists of standard components (Fig. 1) and is powered by an electric motor with a reducer. It can be easily converted for machining any other similar part. The device can be used for chamfering holes of up to 30 mm diameter, provided that the minimum distance between them is 45 mm. In case holes of more than 30 mm diameter must be chamfered, the mandrels holding the cutting tools must be exchanged against larger ones. All chamfers are cut of the same depth, regardless whether or not the surface in which the chamfers are located has been machined. Previously, the flange holes were chamfered individually on a drilling machine, resulting ✓

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S/113/60/000/009/004/005
A002/A001

A Highly Efficient Semi-Automatic Device for the Simultaneous Chamfering of Several Holes

in chamfers of different dimensions. The new device reduced the time required for chamfering the holes in one flange from 0.6-0.65 to 0.08 minutes. In addition, 8 m² floor space were saved owing to the elimination of the drilling machine. There are 2 figures.

ASSOCIATION: Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant
imeni Likhachev)

✓

Card 2/2

TROITSKAYA, V.A.; MEL'NIKOVA, M.V.; BOL'SHAKOVA, O.V.; ROKITYANSKAYA, D.A.;
BULATOVA, G.A.

Fine structure of magnetic storms. Izv. AN SSSR. Fiz. zem. no.6:
82-86 '65. (MIRA 13:7)

1. Institut fiziki zemli AN SSSR.

ROKITYANSKAYA, V.V.

Bending on the main basis of surfaces of zero curvature of
an elliptic space. Uch.zap.KHGU 115:113-119 '61. (MIRA 17:5)

49-12-15/16

Dissertations Defended in the Scientific Council of the Institute of Physics of the Earth, Institute of Physics of the Atmosphere and Institute of Applied Geophysics, Ac.Sc. USSR during the First Semester of 1957, IZV. AKADEM. NAUK, SSSR, Ser. Geofiz. 1957, 12, p. 1532-3.

I.I. Rokityanskiy - Induced Polarisation in Ion-conducting Rocks (Vyzvannaya polarizatsiya ionoprovodyashchikh porod)

- Candidate dissertation. Opponents: Doctor of Geol.-Min. Sciences V.N. Dakhov, Doctor of Phys.-Math. Sciences A.G. Tarkhov, Candidate of Phys.-Math. Sciences D.A. Fridrikhsberg. May 17, 1957.

The author investigated under induced polarisation the physico-chemical phenomena taking place in rocks and other non-uniformly conducting bodies under the effect of an electric current. These phenomena lead to the generation of secondary e.m.f. which exist for some time, even after the primary current is switched off. Study of the nature of the induced polarisation of ion-conducting rocks is of great importance in elucidating the prospecting possibilities of this method, both in field prospecting, particularly coring, and also for studying the properties of transient regions between the liquid (water) and the solid dielectric i.e. in elucidating one of the difficult problems of the physics of Card 15/21 of surfaces. The author has studied the influence on induced

49-12-15/16

Dissertations Defended in the Scientific Council of the Institute of Physics of the Earth, Institute of Physics of the Atmosphere and Institute of Applied Geophysics, Ac.Sc. USSR during the First Semester of 1957.

polarisation of a number of factors: the chemical composition of the pore moisture, the ζ -potential, the structure of the specimen and its uniformity. The experiments were effected in quartz sand which was boiled several times in hydrochloric and nitric acids and then washed in distilled water until the resistance of the pore solution did not reach the resistance of the distilled water (2 500 Ω m). It was found that the chemical composition of the pore moisture influenced the induced polarisation only through the specific resistance and the ζ -potential. For an equal specific resistance of the specimens, the induced polarisation will be the larger, the larger the negative ζ -potential. In the case of a constant ζ -potential, the induced polarisation is proportional to the specific resistance of the specimen, but the speed of the drop does not depend on the specific resistance. In moisture-saturated sands with a re-charged, twin electric layer, the induced polarisation approaches zero and does not depend on the ζ -potential. However Card16/21 in specimens which were not moisture-saturated, but did have a

49-12-15/16

Dissertations Defended in the Scientific Council of the Institute of Physics of the Earth, Institute of Physics of the Atmosphere and Institute of Applied Geophysics, Ac.Sc. USSR during the First Semester of 1957.

re-charged, twin, electric layer, the induced polarisation increases sharply with increasing ζ -potential. On reducing the humidity, the induced polarisation increases proportionally with the specific resistance of the specimen, but for low humidity contents, this increase slows down, the induced polarisation passes through a maximum and then decreases, although the specific resistance of the specimen continues to increase. The author has proved the existence of a certain dependence of the induced polarisation on the degree of dispersion and thereby he indicated the possibility of applying the method of induced polarisation for coring oil deposits for the purpose of determining the permeability and the specific conductivity of rocks. He also obtained the relation between the speed of fall of the induced polarisation and the degree of dispersion. For sands, the speed of fall is the higher the finer the sand. This result seems to favour the view that when passing an electric current through the specimen each sand grain is similar to an electric dipole and the drop

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in the induced polarisation represents the total field of the discharge of these dipoles. The fundamental relations of induced polarisation of ion-conducting rocks were clarified, starting off by taking into consideration the forces acting on the charges of the diffusion part of the twin, electric layer. In the equilibrium state (in the absence of current flow), the only force maintaining the charges of the diffusion layer around the surface is the electro-static attraction from the charges of the fixed layer; therefore, the surface density of the charges of the diffusion layer at each point of the surface equals the density of the charges of the fixed layer. It can be assumed that on applying an external electric field, the surface density of the charges does not change in the fixed layer (or changes much less than in the diffusion layer).

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Dissertations Defended in the Scientific Council of the Institute of Physics of the Earth, Institute of Physics of the Atmosphere and Institute of Applied Geophysics, Ac.Sc. USSR during the First Semester in 1957.

E.I. Parkhomenko - Piezo-electric Effect of Rocks (P'ezoelektricheskiy effekt gornykh porod) - Candidate dissertation.
Opponents: Doctor of Physico-Mathematical Sciences V.F. Bonchkovskiy, Candidate of Physico-Mathematical Sciences I.S. Zholudev, Candidate of Technical Sciences B.A. Bazhenov.
July 21, 1957.

For many centuries, the descriptions of earthquakes mentioned the light effects, but the physical nature of the latter was not known. With the development of investigations in electricity and improved instrumentation, the electrical character of these phenomena was established. Only individual statements of hypothetic character exist on the sources of the changes of the electrical field of the Earth. In view of the importance of this problem of a possible relation between the electro-magnetic and the seismic fields, the author studied the electrical effects in rocks subjected to mechanical force. By means of a dynamic method, a piezo-electric effect was observed in rocks (granite, gneiss, quartzites, etc.) containing quartz grains which are orientated in a specific way. In the

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Dissertations Defended in the Scientific Council of the Institute of
Physics of the Earth, Institute of Physics of the Atmosphere and
Institute of Applied Geophysics, Ac.Sc. USSR during the First
Semester of 1957.

absence of orientation of the quartz grains, no piezo-electric effect was observed. Under laboratory conditions, the existence of the E effect discovered by A.G. Ivanov, was confirmed and also its relation to the presence of a liquid phase in rocks. On the basis of investigation of ideal piezo-electric textures of quartz in accordance with the theory of A.V. Shubnikov, it was found that from a single modification of quartz, it is possible to form piezo-electric textures of the first kind, type ∞ and $\infty:2$ and of two shapes of quartz, it is possible to form a texture of the type $\infty.m$. The possibility was elucidated of ordinating quartz-containing rocks to piezo-electric textures of the type $\infty.m$ and also to the symmetry class 3:2. A technique was developed of the qualitative measurement of the piezo-electric moduli of rocks in the case of longitudinal and transverse effects, by the static method applying an electrometer. It is shown that in rock specimens of volumes of the order of 10 cm^3 , the piezo-electric effect can be observed owing to the non-compensated

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49-12-15/16

Dissertations Defended in the Scientific Council of the Institute of Physics of the Earth, Institute of Physics of the Atmosphere and Institute of Applied Geophysics, Ac.Sc. USSR during the First Semester of 1957.

effect of the individual quartz grains. On the basis of experimental data, the coefficient of orientation of the quartz grains was calculated with some degree of approximation in various rocks by means of the formula of Zheludev. Model tests on granite blocks enabled establishment (in addition to an elastic wave) of two types of electro-magnetic oscillations. Oscillations of one type precede the arrival of the elastic wave and coincide with the incident of emission, oscillations of the other type are recorded at about the same time as the elastic wave. The oscillations of the first type are caused by the piezo effect of the granite block near the emitter of the ultra-sound, whilst oscillations of the second type are caused by the piezo-electric effect of the same granite near to the receiver. The results of these experiments can be applied in studying the physics of earthquakes and also for developing new methods of electric prospecting.

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49 - 2 - 8/13

AUTHOR: Rokityanskiy, I.I.

TITLE: Laboratory investigations of induced polarisation in sedimentary rock. (Laboratornoye izucheniye vyzvannoy polyarizatsii osadochnykh porod).

PERIODICAL: Izvestiya Akademii Nauk, Seriya Geofizicheskaya, 1957, No.2, pp. 217-227. (U.S.S.R.)

ABSTRACT: If there are electron conducting inclusions in the rock, the generated polarisation is attributed to electrode processes. This paper describes the results of an experimental investigation of induced polarisation of rocks which do not contain conductors of the first type, i.e. rocks, one component of which is dielectric, and the other an ionic conductor. The experiments were carried out in quartz sands which were purified by boiling in hydrochloric and nitric acids and subsequently washed in distilled water to remove residual salts.

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TITLE:

Laboratory investigations of induced polarisation in sedimentary rock. (Laboratornoye izucheniye vyzvannoy polyarizatsii osadochnykh porod).

The apparatus for measuring the induced polarisation is shown in Fig.1, p.218. In addition, the induced polarisation, the specific resistance and the potential were also measured. The dependences of induced polarization on the chemical composition of pore moisture, specific resistance, the ζ - potential, moisture and the degree of dispersion were determined. Furthermore, the time characteristics were measured. The metering cell is shown diagrammatically in Fig.2, p.218; para.1 discusses the results relating to the dependence of induced polarisation on the chemical composition and specific resistance; para.2 discusses the dependence of induced polarisation on the ζ - potential; para.3 discusses the dependence of induced polarisation on the moisture content, and para.4 the dependence of induced polarisation on the structure of the specimen. Para.5 deals with the influence of charging time.

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TITLE: Laboratory investigations of induced polarisation in sedimentary rock. (Laboratornoye izucheniye vyzvannoy polyarizatsii osadochnykh porod).

The author concludes that the decrease caused by polarisation consists of exponential spectra.

The text includes 4 diagrams, 12 graphs and 2 tables. All the 5 references cited are Slavic.

ASSOCIATION: Academy of Sciences of the USSR, Institute of Terrestrial Physics (Akademiya Nauk SSSR, Institut fiziki zemli).

PRESENTED BY:

SUBMITTED: 9/21/56

AVAILABLE: Library of Congress
Card 3/3

ROKITYANSKIY, I. I.

49-3-15/16

AUTHOR: Kirillov, F. A.

TITLE: Conference of junior research workers, engineers and aspirants of the Institute of the Physics of the Earth, Ac. Sc., U.S.S.R. (Konferentsiya mladshikh nauchnykh sotrudnikov, inzhenerov i aspirantov Instituta Fiziki Zemli AN SSSR).

PERIODICAL: "Izvestiya Akademii Nauk, Seriya Geofizicheskaya"
(Bulletin of the Ac. Sc., Geophysics Series), 1957,
No. 3, pp. 411-415 (U.S.S.R.)

ABSTRACT: The conference was held on December 24-26, 1956. 21 papers were read relating to work completed in 1955 and 1956. In this report the contents of the individual papers are briefly summarised. I.I. Rokityanskiy read a paper on the study of the induced polarisation in ion conducting rocks.

ROKITYANSKY, I.I., ZYBIN, K.YU. SHEPETNOV, R.N., ROKITYANSKAYA, D.A.,
and TROITSKAYA, V.A.,

"The Fine Structure of Magnetic Storms with Respect to
Pulsations with Periods Less than 15 sec,"

report presented at the Intl. Conference on Cosmic Rays and
Earth Storms, Kyoto, Japan, 4-15 Sept 1961.

ROKITYANSKY, I.I.^I, ZYBIN, K.YU., SHEPETNOV, R.V., ROKITYANSKAYA, D.A.,
and TROITSKAYA, V.A.,

"The Connection of Pc and Pt Pulsations with Magnetic Storms,"
report presented at the Intl. Conference on Cosmic Rays and
Earth Storms, Kyoto, Japan, 4-15 Sept 1961.

29729

S/169/61/000/008/050/053

A006/A101

3,9410 (1482)

AUTHORS: Okhatsinskaya, M.V., Rastrusin, Yu.B., Rokityanskiy, I.I., Shchepetnov, R.V.

TITLE: Regularities in the excitation of short-period oscillations in middle latitudes

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 8, 1961, 42, abstract 80280 (V sb. "Korotkoperiod. kolebaniya elektromagnitn. polya Zemli, no. 3", Moscow, AN SSSR, 1961, 17 - 22, English summary)

TEXT: The study of short-period oscillations of telluric currents during the IGY was carried out at stations of the Institut fiziki Zemli AN SSSR (Institute of Physics of the Earth, AS USSR) (Borok, Alma-Ata, Petropavlovsk-Kamchatskiy, and Alushta). These investigations made it possible to detect a number of common regularities of short-period oscillations in middle latitudes. There are two basically different types of short-period oscillation: namely, stable oscillations, po, with $T \sim (15 \div 40)$ sec and train-type oscillations, pt, with $T \sim (50 \div 90)$ sec. The maximum number of po cases occurs at local midday, and pt at local midnight, independent of the longitude of the station. The

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3, 9110 (1121, 1442)

30280
S/049/61/000/011/001/005
D239/D303

AUTHOR: Rokityanskiy, I. I.

TITLE: Adapting geomagnetic methods to anisotropic and inhomogeneous masses

PERIODICAL: Akademiya nauk. Izvestiya. Seriya geofizicheskaya, no. 11, 1961, 1607-1613

TEXT: The E and H horizontal components of a disturbance to the earth's magnetic field at a point above a layer which is neither isotropic nor homogeneous are related in a manner which may be represented by

$$E_u = \zeta_1 [H_n]_u = \zeta_1 H_v$$

$$E_v = \zeta_2 [H_n]_v = -\zeta_2 H_u \quad (3)$$

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Regularities in the excitation ...

diurnal run of p_3 is asymmetric and has a broad maximum around midday. The increase of p_3 amplitudes occurs 1.5 times more quickly than their damping. A somewhat increased p_3 number was observed in summer as compared to the winter. The diurnal p_3 run has a sharp maximum around local midnight. Seasonal variability was not observed for p_3 . Amplitudes of short-period oscillations in middle latitudes are low, being fractions of a unity and a few mv/km for p_3 , and several mv/km for p_1 . There are indications of a tendency for increased short-period oscillation amplitudes at seaside stations. Previous concepts on the dependence of p_3 and p_1 on universal time were explained as follows: a comparison was made of the diurnal run of short-period oscillations on stations located close in the longitude; a comparison was made of unclear maxima obtained from a small number of cases. This did not permit the detection of the longitudinal effect of maximum shift even for substantially remote stations; moreover, there are oscillations, in both modes, correlated with universal time, which occur seldom but are very intensive.

K. Zybin

[Abstracter's note: Complete translation]

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Adapting geomagnetic methods ...

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where ζ_1, ζ_2 are the principal terms of a tensor ζ_{xy} , n is a unit vector in the direction of the vertical, and u, v are orthogonal axes of anisotropy. It is the author's object to show how a quantity λ , called the coefficient of anisotropy, and defined by $\lambda = \zeta_2/\zeta_1$, may be determined from observations. The directions of the u, v system are, of course, unknown. The relations required are deduced to be

$$\operatorname{tg} \Delta \varphi = \frac{(1 - \lambda) \cdot \operatorname{ctg} (\varphi_H - \alpha)}{1 + \lambda \operatorname{ctg}^2 (\varphi_H - \alpha)} \quad (12)$$

and

$$\Delta \varphi = a \varphi_H + b \quad (13)$$

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Adapting geomagnetic methods ...

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where $\Delta\varphi$ is 90° minus the angle between E and H, φ'_H is the angle between H and an arbitrary set of orthogonal axes used for the measurements (which in practice are usually the geographic directions), α is the angle between the u, v and x, y systems and a and b are related by $b = -\alpha a$. A set of observations of $\Delta\varphi$ and φ'_H can be used in conjunction with a previously plotted family of curves for various values of λ to determine the local value of λ . A discussion of errors is given and the results of observations at the Alushta geomagnetic station are used to illustrate application of the method. The errors in λ may be between 15 to 60 percent. M. N. Berdichevskiy is thanked for criticizing the draft. There are 3 tables, 4 figures and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: W. D. Parkinson, Directions of rapid geomagnetic fluctuations. Geophys. J. Roy. Astron. Soc., 2, no. 1, 1959.

ASSOCIATION: Akademiya nauk SSSR. Institut fiziki zemli (Academy of Sciences of the USSR. Institute of Physics of the Earth)
Card 3/4

Adapting geomagnetic methods ...

SUBMITTED: April 7, 1961

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D239/D303

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ROKITYANSKIY, L. I.

PHASE I BOOK EXPLOITATION 80V/5215

Academiya nauk SSSR. Mezhdunarodnyy komitet po provedeniyu
seredunarodnogo geofizicheskogo goda. XII razdel programy 1980:
Zemnoy magnetizm i zemnyy tok.

Kortkoperiodicheskiye kolebaniya elektromagnitnogo polya zemli
(Short-Period Oscillations of the Earth's Electromagnetic
Field) Moscow, Izd-vo AN SSSR, 1981. 112 p. 1,800 copies
printed (Series: Izv. Sbornik statey, No. 3)

Reep. Eds.: A. G. Kalashnikov, Doctor of Physics and Mathematics,
and V. A. Troitskaya, Candidate of Physics and Mathematics;
Ed.: Y. I. P. Shchukina; Tech. Ed.: Ye. V. Makum.

PURPOSE: This publication is intended for geophysicists.

COVERAGE: This collection of articles, published by the Inter-
departmental IOP Committee of the USSR Academy of Sciences,
treats problems of geomagnetism and telluric currents. In-
dividual articles deal with various (short-period, gigantic,
steady, etc.) oscillations of the terrestrial electromagnetic
field, particularly in the Arctic region. No personalities
are mentioned. Brief English abstracts accompany each article.
References follow individual articles.

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3.9400

22430
S/049/61/000/002/008/012
D242/D301

AUTHOR: Rokityanskiy, I. I.

TITLE: Scattering of conductivity in ground systems and rocks at low frequencies

PERIODICAL: Akademiya nauk SSSR. Seriya geofizicheskaya. Izvestiya, no. 2, 1961, 251-254

TEXT: When measuring the resistance between two ground systems by alternating current it appears that the interelectrode resistances depend on the frequency, as may be seen from Fig. 1 in which Nos. 1 - 3 denote the periods October 1957, July 1958 and December 1959. This relationship may be naturally assumed to be due to induced polarization; A. N. Frumkin, V. C. Bagotskiy, Z. A. Iofa, B. N. Kabanov (Ref. 1: Kinetika elektrodnykh protsessov (Kinetics of Electrode Processes) Izd. MGU, 1952) and V. A. Komarov (Ref. 2: O prirode elektricheskikh poley vyzvannoy polyarizatsii i vozmozhnostyakh ikh uspol'zovaniya pri poiskakh rudnykh mestorozhdeniy (Nature of the Electric Fields of Induced Polarization and their Use when Prospecting for Ore Deposits) Vestn. LGU,

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Scattering of conductivity...

ser. geol. i. geogr., vyp. 1, No. 6, 1957) have shown that for a sufficiently long passage of direct current the potential jump Φ_{∞} at the electrode is established by:

$$\Phi_{\infty} = k \frac{J}{s}, \quad (1)$$

where s is the electrode area, J the current strength and k a low polarization coefficient. According to Frumkin (Ref. 1: Op cit) the electrode polarization results from the polarization concentration, overvoltage, electro-chemical reactions, the charge and discharge of the double electric layer and the formation of poorly-conducting layers, etc. Each process yields its own potential jump φ_{∞} and expression (1) becomes:

$$\sum \varphi_{\infty i} = \sum k_i \frac{J}{s}, \quad (1a)$$

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D242/D301

Scattering of conductivity...

where $\sum \varphi_{\infty i} = \Phi$; $\sum k_i = k$; and k_i is the polarization coefficient for each process; the generalized formula (1) is naturally correct for each separate process:

$$\varphi_{\infty} = k \frac{J}{S}. \quad (1b)$$

In one elementary process the electrode potential depends on the time of current passage which approximates to φ_{∞} , where φ is considered to be its instantaneous value. If the rate of change of the potential jump ($d\varphi/dt$) at the electrode is assumed to be proportional to the difference between the potential jump for an instantaneous value of the polarizing current and that at a given moment, i.e.

$$\frac{d\varphi}{dt} = \frac{1}{\tau} (\varphi_{\infty} - \varphi), \quad (2)$$

where $\frac{1}{\tau}$ is the proportionality coefficient, the expression:

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Scattering of conductivity...

$$\frac{d\varphi}{dt} + \frac{1}{\tau} \varphi = \frac{k}{\tau S} J. \quad (3)$$

is obtained on inserting (1b) in (2). The right term represents the magnitude of the polarizing current whose variation law must be specified, and equation (3) gives the exponential dependence of the potential jump on time, τ being the constant time of this drop. The actual drop of induced polarization is not exponential, but the exponent may be approximately represented in the form of a sum since several processes take place at the polarized electrode. In the case of the passage of a sinusoidal alternating current $J = J_0 \sin \omega t$, then

$$\frac{d\varphi}{dt} + \frac{1}{\tau} \varphi = \frac{k J_0}{\tau S} \sin \omega t, \quad (4)$$

$$\varphi = \frac{J_0 k}{S} \frac{1}{\sqrt{1 + \omega^2 \tau^2}} \sin(\omega t - \arctg \omega \tau). \quad (5)$$

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Scattering of conductivity...

whence the polarized potential of the electrode lags in phase behind the polarizing current by angle $\alpha = -\arctg \omega \tau$, and the electrode resistance is expressed as:

$$Z_{en} = \frac{k/S}{1 + \omega^2 \tau^2} (1 - j\omega \tau). \quad (6)$$

Since the actual induced polarization consists of several elementary processes, the electrode may be considered as a complex of resistances connected in series:

$$Z_{en} = \sum_{i=1}^n \frac{k_i/S}{1 + \omega^2 \tau_i^2} (1 - j\omega \tau_i). \quad (7)$$

It is now possible to calculate the resistance of a circuit with two earths. Assuming that there are no other reactive resistances in the circuit besides the electrodes and that R_0 is the general resistance of the circuit, the expression:

$$Z = R_0 + \sum_{i=1}^n \frac{k_i/S}{1 + \omega^2 \tau_i^2} - j\omega \sum_{i=1}^n \frac{\tau_i k_i/S}{1 + \omega^2 \tau_i^2}. \quad (8)$$

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D242/D301

Scattering of conductivity...

may be derived, where n is the number of components which takes into account the polarization at both electrodes. The phase difference ψ between the voltage and current in the circuit and the absolute value of the interelectrode resistance in relation to the frequency may then be determined from

$$\operatorname{tg} \psi = - \frac{\omega \sum_i \frac{\tau_i k_i / S}{1 + \omega^2 \tau_i^2}}{R_0 + \sum_i \frac{k_i / S}{1 + \omega^2 \tau_i^2}} \quad (9)$$

$$R = |Z| = \sqrt{\left(R_0 + \sum_{i=1}^n \frac{k_i / S}{1 + \omega^2 \tau_i^2} \right)^2 + \left(\omega \sum_{i=1}^n \frac{\tau_i k_i / S}{1 + \omega^2 \tau_i^2} \right)^2} \quad (10)$$

when $n = 2$ and 3 , formula (10) is used for interpreting the experimentally obtained relationship of the interelectrode resistances to the frequency. Expression (9) with $n = 2$ is used to

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evaluate the possible phase difference between the current and voltage in a circuit with two earths; the parameters of both electrodes are assumed to be similar: $k_1/S = k_2/S = k/S$, $\tau_1 = \tau_2 = \tau$.

The maximum phase difference is observed when

$$\omega = \frac{1}{\tau} \sqrt{\frac{R_0 + 2k/S}{R_0}}$$

$$\text{tg } \psi_{\text{max}} = \frac{k/S}{\sqrt{R_0(R_0 + 2k/S)}} \quad (11)$$

In some cases the phase difference between the current and voltage is small, but it is high in others and has to be taken into account. As Frumkin (Ref. 1: Op cit) and Komarov (Ref. 2: Op cit) have already noted, the coefficient k depends on and is inversely proportional to the polarizing current. Turning to the flow of alternating current through a polarized rock, coefficient k which

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D242/D301

Scattering of conductivity...

accordance with (15), a polarized medium may be considered as regards its behavior in a variable field to be equivalent to a medium with the complex conductivity

$$\bar{\gamma} = \gamma \left[1 - \sum_{i=1}^n \frac{\eta_i}{1 + \omega^2 \tau_i^2} + i\omega \sum_{i=1}^n \frac{\eta_i \tau_i}{1 + \omega^2 \tau_i^2} \right] \quad (17)$$

Use of expression (17) may answer the question of the influence of volume polarization on the alternating-current flow through rocks. Substituting (17) with $n = 1$ in the Maxwell equation for a homogeneous medium and disregarding the displacement currents, the wave number $\bar{k} = k + iS$ is found for the harmonic field where

$$k = \sqrt{\frac{2\pi\mu\gamma\omega}{c^2}} \sqrt{\frac{\eta\omega\tau}{1 + \omega^2\tau^2} \left[\sqrt{1 + \left(\frac{1 + \omega^2\tau^2 - \eta}{\eta\omega\tau} \right)^2} + 1 \right]} \quad (18)$$

$$S = \sqrt{\frac{2\pi\mu\gamma\omega}{c^2}} \sqrt{\frac{\eta\omega\tau}{1 + \omega^2\tau^2} \left[\sqrt{1 + \left(\frac{1 + \omega^2\tau^2 - \eta}{\eta\omega\tau} \right)^2} - 1 \right]} \quad (19)$$

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Scattering of conductivity...

The induced polarization evidently decreases the absorption coefficient S at all frequencies which may be explained as follows. The absorption coefficient signifies the conversion of electric energy into thermal energy, so a decrease in S implies a partial preservation of electric energy by the induced polarization. Part of the energy of the primary electric field is certainly expended, but it does not pass into heat and is converted into energy of the secondary electric field as a result of electro-chemical processes during the discharge of induced polarization. There are 2 figures and 3 Soviet-bloc references.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki zemli (Academy of Sciences USSR, Institute of Physics of the Earth)

SUBMITTED: April 25, 1960

Card 11/12

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S/203/62/002/006/018/020
A160/A101

AUTHOR: Rokityanskiy, I. I.

TITLE: Medium-latitude Lpc during geomagnetic storms

PERIODICAL: Geomagnetizm i aeronomiya, v. 2, no. 6, 1962, 1147 - 1148

TEXT: The article deals with an investigation of short oscillations observed during geomagnetic storms and recorded by Soviet medium-latitude stations of terrestrial currents in July 1957 - July 1960 with a scan of 90 mm/hour. The investigation revealed that oscillations are observed during some storms, which are not encountered at medium-latitude stations during quite intervals, but are rather characteristic for polar stations. Two main types of oscillations may be noted. 1) Intensive polar-disturbance oscillations with a period of 5 - 12 sec. 2) Long stable oscillations called Lpc by Jacobs. It was noted that, in case intensive short polar-disturbance oscillations arise during a storm, these oscillations are followed by Lpc in a number of cases. Such storms are henceforth called short-periodical storms. From July 1957 to July 1960, the mentioned regularity was most clearly observed during six storms which took place on

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Medium-latitude Lpc during geomagnetic storms

S/203/62/002/006/018/020
A160/A101

11 November 1958, 12 May 1959, 15 and 17 July 1959, 31 March 1960 and 30 April 1960. The following conclusions are drawn: 1) There are short-periodical storms that use to start suddenly, and such that begin gradually. 2) All clearly-expressed short-periodical storms occur during the summer half-year with a maximum number of appearances from May to August. 3) The diurnal variation of the Lpc oscillations during the storms at the Petropavlovsk Station has a daily maximum by local time. 4) If the Lpc are simultaneously observed at a few stations, their periods must not necessarily coincide as in the case of common Lpc. The described penetration of polar disturbances and the Lpc into medium latitudes proves that, during some geomagnetic storms, the agents (causing these phenomena) descend from high to medium latitudes. There is 1 figure.

ASSOCIATION: Geofizicheskaya stantsiya "Borok" Instituta fiziki Zemli AN SSSR
(Geophysical Station "Borok" of the Institute of Physics of the
Earth, AS USSR)

SUBMITTED: April 24, 1962

Card 2/2

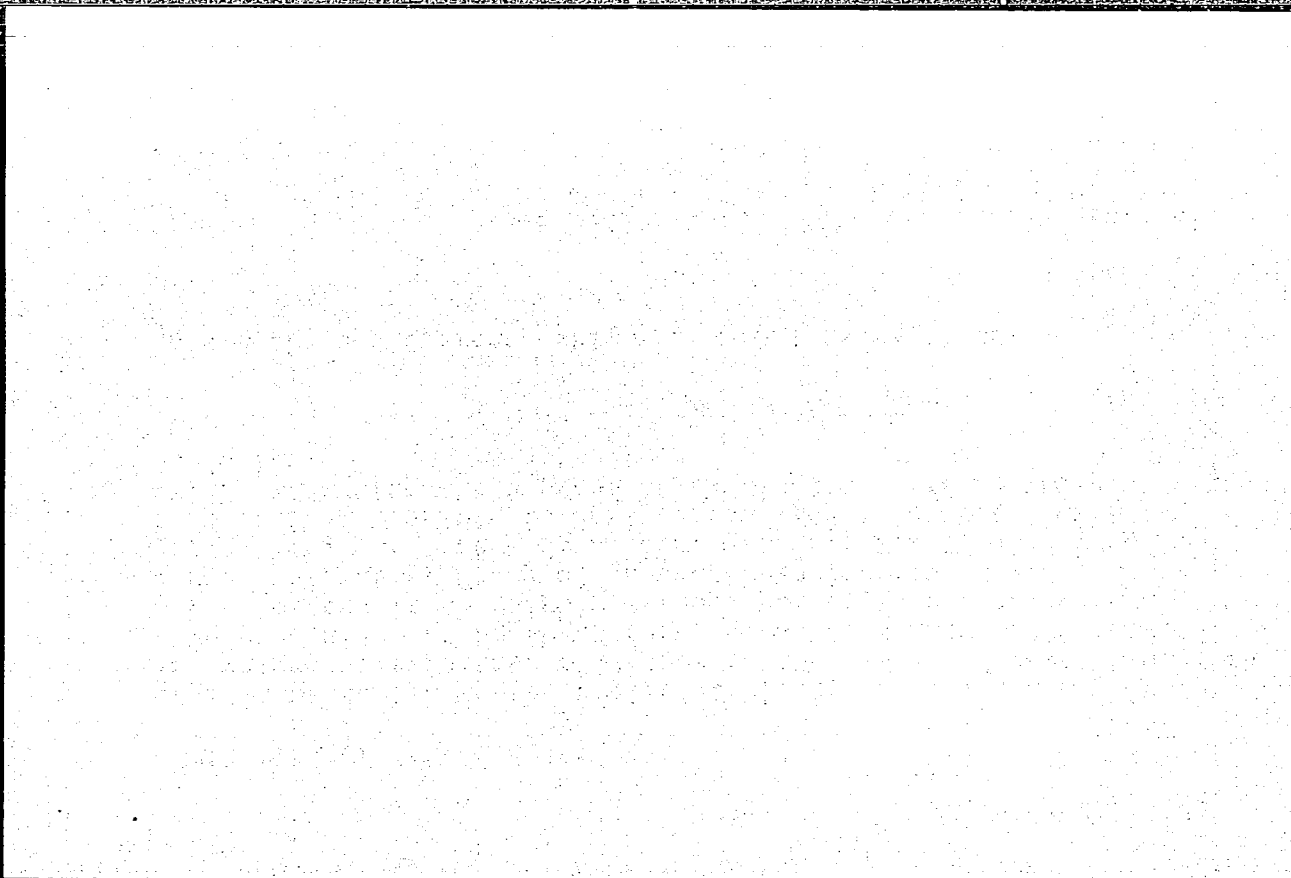
ROKITYANSKIY, I.I..

Curve of the deep magnetotelluric probing based on data from
the Borok Observatory. Izv. AN SSSR. Ser.geofiz. no.5:679-
680 My '62. (MIRA 15:8)

1. Institut fiziki Zemli AN SSSR.
(Earth currents)

"APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R001445



APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R0014451

ROKITYANSKIY, I.I.

Interferences observed in the recording of fast fluctuations of
terrestrial currents. Izv. AN SSSR. Ser. geofiz. no.7:943-945
Jl '62. (MIRA 15:7)

1. Institut fiziki Zemli, AN SSSR.
(Earth currents)

22430

S/049/61/000/002/008/012

D242/D301

Scattering of conductivity...

is determined by the ratio: $\eta = - \frac{E_{VP}}{E}$, (12)

represents the polarization characteristic during the passage of a direct current, where E is the established field strength, E_{VP} is the limiting field strength of induced polarization, attainable with a sufficiently long application of the field E , and E_{VP} is the instantaneous, irregular field of induced polarization. Then, as with formula (2)

$$\frac{dE_{VP}}{dt} = \frac{1}{\tau} (E_{VP}^{\infty} - E_{VP}). \quad (13)$$

Inserting (12) in (13) and considering the case of the imposition of the harmonic field $E = E_0 \sin \omega t$

$$E_{VP} = - \frac{\eta E}{1 + \omega^2 \tau^2} (1 - i\omega\tau). \quad (14)$$

from which it is apparent that the field of induced polarization

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L 13128-63

EWT(1)/BDS

AFPTC/ESD-3

GW

S/049/63/000/004/003/005

AUTHOR:

Rokityanskiy, I.I.

TITLE:

Distribution of micropulsations of RS in relation to the amplitude

PERIODICAL:

Akademiya nauk SSSR. Izvestiya. Seriya geofizicheskaya, no. 4, 1963, 590-595

TEXT:

The results of the recording of the amplitudes of RS with a highly sensitive registration (0.3 millivolt/millimeter/kilometer) of earth currents are studied for obtaining a mathematical expression of the distribution for a number of instances of RS in relation to the amplitude. The produced expression (Poisson's distribution) is used for the determination of the average amplitude of the micropulsations of RS registered for a set-up with a relatively low sensitivity. In this work, the obtained relationships of the frequency of the appearance of RS vs. amplitude are compared with Maxwell, Rayleigh, and Poisson theoretical distributions.

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L 13128-63

s/049/63/000/004/003/005

Distribution of micropulsations...

For Poisson distribution, it is:

$$\varphi = \frac{x}{\alpha} e^{-\frac{x}{\alpha}}, \quad \alpha = 0.596 x_m \quad (4)$$

where α -- parameter of distribution, x_m -- median value of the amplitude. Detailed experimental data are presented in tables and histograms for amplitude and time intervals. The work includes the analysis of data for one year from the Alushta Geophysical Station. There are 3 tables, 3 figures, and 4 references. The most recent English language reference is Bolshakova, O.V., Zybin, K.Y., On the frequency of occurrence and amplitude spectrum of the geomagnetic field pulsations, Ann. Geophys. 17, no. 4, 1961

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli (Academy of Sciences of USSR, Institute of Earth Physics)

SUBMITTED: October 15, 1962

Card 2/2

ACCESSION NR: AT4032217

S/3089/63/000/005/0093/0097

AUTHOR: Rokityanskiy, I. I.

TITLE: Results of observations of telluric currents at the Geophysical Station Alushta during the IGY

SOURCE: AN UkrSSR. Mezhdovedomstvennyy geofizicheskiy komitet. Geofizika i astronomiya; informatsionnyy byulleten', no. 5, 1963, 93-97

TOPIC TAGS: telluric current, gradient, polarization, current vector, periodic variation, distinct extremeness, local time, amplitude, bay type variation, equinox, shore effect, geological structure

ABSTRACT: The average value of the gradient of telluric currents at Alushta Geophysical Station on the Crimean Peninsula during the IGY was 14 mv/km. The polarization of the current vector was nearly linear in both main (N-S and E-W) directions. The most probable length of pc variations at Alushta was 18—20 sec. No extreme pc variation was observed, although variations lasting 10—15 sec had a maximum occurrence in morning hours. Periodic variations of 15-to 20

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ACCESSION NR: AT4032217

sec had a maximum with a small superposed minimum on it at noon. PT variations reached a maximum at 11 p.m. local time. PT variations lasted generally from 50—70 sec. An average voltage of bay-type variation amplitude was 25 mv/km. Bay-type variations occurred usually in the equinoctial periods and their diurnal maximum took place about 12 p.m. local time. The shore effect exists at Alushta. Under the influence of the geological structure of the Crimean Peninsula and the Black Sea, the electric vector E becomes elliptically polarized with the major axis directed northwest to southeast; the axial ratio is 3:1. The polarization of the magnetic vector is slightly changed. Orig. art. has: 5 figures and 5 formulas.

ASSOCIATION: Institut fiziki Zemli, Akademii nauk SSSR (Institute of Physics of the Earth, Academy of Sciences SSSR)

SUBMITTED: 00

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: AS

NO REF SOV: 004

OTHER: 001

Cord 2/2

ROKHLENKO, M. A.

PHASE I BOOK EXPLOITATION

SOV/3785

Smolenskiy, Boris Lipovich, Engineer, and Mikhail Abramovich Rokhlenko, Engineer

Kompleksnaya modernizatsiya tekarno-revol'vernykh stankov tipa 1336
(Overall Modernization of the Type 1336 Turret Lathe) Leningrad, 1959.
13 p. 6,500 copies printed. (Series: Obmen peredovym opytom.
Seriya: Modernizatsiya i remont oborudovaniya, vyp. 4)

Sponsoring Agencies: Leningrad. Dom nauchno-technicheskoy propagandy;
Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed.: Ye. F. Posternyak, Engineer; Tech. Ed.: V.L. Gvirtz.

PURPOSE: This pamphlet is intended for fixture makers, foremen and lathe operators.

COVERAGE: The authors describe attachments and devices for modernizing machine tools. No personalities are mentioned. There are 5 references, all Soviet.

Card 1/2

Card 2/2

VK/rn/gm
7-13-60

Country : USSR
Category ; Soil Science. Fertilizers. Organic Fertilizers. J
Abs Jour : RZhBiol., No 6, 1959, No 24663
Author : Zhenatov, A. P.; Rokhtanen, L. S.
Inst : -
Title : Concerning the Economic Effectiveness of the Utilization of Peat as a Fertilizer.
Orig Pub : Udobreniye i urozhay, 1958, No. 8, 44-46
Abstract : No abstract.

Card : 1/1

57

ROL. TYANSKIY, I.I.

Dispersion of the conductivity of ground systems and rocks in
case of a low-frequency current. Izv. AN SSSR. Ser. geofiz.
no. 2:251-254 F '61. (MIRA 14:2)

1. Institut fiziki Zemli AN SSSR.
(Electric prospecting)

SOV/49-59-7-15/22

AUTHOR: Rokityanskiy, I. I.

TITLE: On the Nature of the Induced Polarization of the Ion-Conductive Rocks

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 7, pp 1055-1060 (USSR)

ABSTRACT: This is a continuation of the article under the same title in this journal, 1957, Nr 2. The explanation of the relationships described there is attempted. Fig 3 illustrates the assumed double electric field where the positive charge of the diffusive layer is represented by dots, the density of which decreases with distance. The negative charge of the double electric layer is shown by the inner circle composed of minus signs; the short arrows represent the field of the double electric layer. The vector of the external field and its components E_N and E_t (drawn here on a larger scale) are smaller than those of the double electric layer. On the side of the rock particle facing the positive hot electrode (left side, Fig 3) the normal component of the external field coincides with the field of the double layer ($\zeta < 0$). Therefore, a force exerted on the charge of the diffusive layer becomes greater;

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SOV/49-59-7-15/22

On the Nature of the Induced Polarization of the Ion-Conductive Rocks

also the density of the positive charges of the diffusing layer increases on this side. The other side (right, Fig 3) has a smaller density of the positive charges. Thus, the polarization, i.e. a deviation from the equilibrium, occurs as shown in Fig 2. The theoretical calculations of the above phenomena are described by Eqs (1)-(10) and the numerical example given on p 1060. Thanks are given to A. N. Frumkin, A. I. Zaborovskiy and D. A. Fridrikhsberg for advice. There are 3 figures and 8 Soviet references.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli (Academy of Sciences USSR, Institute of Physics of the Earth)

SUBMITTED: May 25, 1957.

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CA 70

PROCESS AND PROPERTIES INDEX

Butadiene and its polymer. The influence of carbon dioxide on the polymerization of butadiene with sodium, and the sodium-carbon dioxide polymer of butadiene. G. G. Koldyanskii and I. V. Rokityanskii. *Soviet. Khim.* 1956, No. 6, 2-7; cf. C. A. 50:5069. The influence of the proportion of CO₂ (from 0 to 8.52 cc. per 4.5 g. of butadiene (I)), the surface of Na (2.50 to 40.50 sq. cm.), and the temp. (25° and 60°) on the retardation of the polymerization of I in the presence of CO₂, were studied. A special Na-CO₂ polymer (II) was formed in the presence of CO₂. It is a white porous product, insol. in CCl₄, CHCl₃ and ether, and contg. 89.67% C and 11.04% H. II oxidizes quickly in air and it catalyzes the polymerization of I to II. Addn. of II to Na butadiene rubber lowers considerably its mech. qualities. Eight references. A. Pestoff

ASS-51A METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS																									
1ST AND 2ND CODES													3RD AND 4TH CODES												
PROCESSES AND PROPERTIES INDEX																									
3																									
<p>Polymerization of butadiene with sodium in mixtures with pseudobutylene and with pentane. I. V. Rokityanskii and M. Yu. Lekakh. <i>Sintet. Kautschuk</i> (U. S. S. R.) 1986, No. 9, 6-12.—In the presence of pseudobutylene the yield of butadiene polymers was 116-135% of the butadiene. The mixt. contained 10.78% of low-mol. polymers (C_8H_{14}, $C_{11}H_{20}$, $C_{14}H_{26}$) and of 89.22% of high-mol. polymers. In the presence of pentane the yield corresponded to the proportion of the butadiene reacting, and consisted of high-molecular polymers. A. Pestoff</p>																									
<p>ASD-314 METALLURGICAL LITERATURE CLASSIFICATION</p>																									
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INDEX AND THE ORDER		POSITIVE AND PROPERTIES INDEX	
<p>ca</p>		<p>10</p>	
<p>Isomerism of linoleic acid. II. G. V. Pigulevskii and I. V. Mikhaylovskii. <i>J. Gen. Chem.</i> (U. S. S. R.) 7, 682-4 (1937); cf. <i>C. A.</i> 20, 2170. Two double bonds in linoleic acid (I) theoretically permit the existence of 4 geometric isomers. To det. if natural I and I synthesized by debromination of tetrabromostearic acid (possibility of isomerization during debromination) contain the same isomers, poppy seed oil (30 g.) (contg. about 50% I (30% α-linoleic acid), 28% oleic acid, 7.2% satd. acids, and 0.5-0.7% unsaponifiables) in Et₂O is oxidized with Br₂/H₂O (2.80% active O, 8% excess) for 5 days, part of the Et₂O expelled, the soln. dried, Br₂/H₂O removed with 5% KOH, the soln. dried, the Et₂O expelled, the residue (32.13 g.) hydrolyzed, and the acids (30.7 g.) fractionally crystd. from 60 ml. EtOH to give 11.85 g. dihydroxylinoleic acid (II), m. 78-78.5°; 5.7 g. dihydroxyoleic acid, m. 50-2°; and 13.15 g. of liquid products, mol. wt. 442.1 (by titration method), chiefly the liquid isomer of II. The high mol.-wt. detn., checked by the l.-p. method could not be explained. Since synthetic I gave practically analogous results (cf. <i>C. A.</i> 20, 2170), the two preps. of I are concluded to be identical. The oxidation of I with Br₂/H₂O is an extremely convenient method of prep. II.</p>			
<p>John Livak</p>			
<p>ASAC-11A METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>1930S CLASSIFICATION</p>			
<p>1930S NEW ONE ONE</p>			
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<p>1930S ONE ONE ONE</p>			

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Vorish. I. V. Rokityanskii and A. I. Sav'lov. Russ.
1974, Dec. 26, 1000-1001. Polymerization of divinyl is polymerized
at 50-70° in the presence of alkali metals, a sacative is
added, and the mixt. is dissd. with a solvent to the required
consistency.

ASD SIA METALLURGICAL LITERATURE CLASSIFICATION

U.S. DEPT. OF COMMERCE
BUREAU OF MINES
GEOL. SURV. DIV. 151

ROKITYANSKIY, I. V.

PA 64T10

USER/Chemistry - 1,3-Butadiene
Chemistry - Polymerization

Feb 1948

"Polymerization of Divinyl by Sodium in the Presence of Carbon Monoxide," I. V. Rokityanskiy, All-Union Order of Labor Red Banner Sci Res Inst of Synthetic Rubber Imeni Akademika S. V. Lebedev, 64 pp

"Zhur Prikl Khim" Vol XII, No 2

Continuing previous study, it was found that carbon monoxide pronouncedly inhibits polymerization of 1,3-butadiene by sodium and at above 0.6 mole % of carbon monoxide, no polymerization by sodium, but rather autopolymerization of butadiene to spongy product takes place, and this process is much more rapid at 60° than at 20-25°. Effect is similar to that produced by carbon dioxide, the mechanism of the two processes being similar. When moisture is present, carbon monoxide is combined by the caustic alkali formed and does not affect polymerization.

64T10

AUTHORS: Marey, A. I., Rokityanskiy, I. V. and Samoletova, V.V. SOV/138-59-2-3/24
TITLE: Influence of the Polymerization Temperature of Butadiene with Alkali Metals on the Structure and Frost Resistance of Polymers (Vliyaniye temperatury polimerizatsii butadiyena shchelochnymi metallami na stroyeniye i morozostoykost' polimerov)
PERIODICAL: Kauchuk i rezina, 1959, Nr 2, pp 9-12 (USSR)
ABSTRACT: Butadiene polymers have an irregular micro- and macro-structure. This is also characteristic for polybutadiene and polymers obtained during polymerization in the presence of alkali metals and their organic compounds. The authors carried out experiments on the relation between conditions of alkali polymerization, the structure and the properties of the polymers, and investigated the dependence of the glass temperature of butadiene polymers on the content of vinyl groups whilst changing the polymerization temperature from 0 to 120°C in the presence of alkali metals (lithium, sodium and potassium). Data on the structural analysis of polymers by ozonization were published by A. I. Yakubchik et al. Card 1/4 (Ref 6). The content of butadiene chains with vinyl

Influence of the Polymerization Temperature of Butadiene with
Alkali Metals on the Structure and Frost Resistance of Polymers

SOV/138-59-2-3/24

groups in the polymer was defined according to the quantity of formic acid and formaldehyde in the ozonolysis products. Data in Table 1 indicate that an increase in the polymerization temperature in the given limits causes a substantial linear decrease in the content of vinyl groups in the polymers. This is particularly marked when butadiene is polymerized in the presence of lithium, and is observed to a much lesser degree when potassium is used. The difference in the reaction rates of the addition of butadiene molecules in the 1,2 and 1,4 position at a given temperature is defined by the various values of activation energies of these processes, and formulae are given for calculating the reaction rates and the activation energies. Fig 1: the dependence of the logarithm of the ratio of concentration of the 1,4 and 1,2 bonds on the polymerization temperature. It was found that the glass temperature of the butadiene polymer is a linear function of the concentration of vinyl groups. Glass temperatures for a number of

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SOV/138-59-2-3/24

Influence of the Polymerization Temperature of Butadiene with
Alkali Metals on the Structure and Frost Resistance of Polymers

butadiene polymers containing a varying number of vinyl groups are given in Table 2. Formulae for calculating the concentration of butadiene chains in the polymer (S_v) are given, and it was found that the maximum concentration S_m equals 2, when S_v equals 1, which corresponds to polymers in which all the monomer molecules are added in the 1.2 position. The linear dependence between the glass temperature of the polymer T_g and the concentration of the vinyl groups (S_m) in the polymer chain is shown in a graph (Fig 2) and it is suggested that the content of vinyl groups can be defined according to the glass temperature. This was confirmed by B. A. Dolgoplosk et al. (Ref 12). Polymers obtained at a temperature of 80°C and above are not completely soluble which confirms a spatial or branched structure at sufficiently high plasticity. The separated pure insoluble part of the polymer had the same glass temperature as the soluble fraction. Therefore,

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Influence of the Polymerization Temperature of Butadiene with
Alkali Metals on the Structure and Frost Resistance of Polymers

the glass temperature of the butadiene polymers is only
defined by the content of vinyl groups and does not
depend on their branched structure.

There are 2 figures, 2 tables and 12 references, 8 of
which are Soviet and 4 English.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut
sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Sci
tific Research Institute for Synthetic Rubber imeni S.V. Lebedev)

Card 4/4

MAREY, A.I.; ROKITYANSKIY, I.V.; SAMOLETOVA, V.V.

Effect of the temperature of the polymerization of butadiene
in the presence of alkali metals on the structure and frost-
resisting properties of polymers. Kauch. i rez. 18 no.2:9-12
P '59. (MIRA 12:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo
kauchuka imeni S.V. Lebedeva.
(Butadiene) (Polymerisation)

ROKITYANSKIY, I.I.

Shore effect in the variation of the earth's electromagnetic field. Izv. AN SSSR. Ser. geofiz. no.12:1814-1822 D '63.
(MIRA 17:1)

1. Institut fiziki Zemli AN SSSR.

ROKITYANSKIY, Vadim Ivanovich; SIMONYAN, K.S., red.;

[Lesions and orthopedic diseases caused by activities in
physical culture and sports] Povrezhdeniia i ortopediche-
skie zabolevaniia pri zaniatiiakh fizkul'turoi i sportom.
Moskva, Izd-vo "Meditsina," 1964. 235 p. (MIRA 17:6)

ROKITYANSKIY, V.I., starshiy nauchnyy sotrudnik

Ultrasonic therapy in arthrosis deformans of the knee joint.
Ortop., travm. i protez. 25 no.1:3-7 Ja '64. (MIRA 17:9)

1. Iz Sverdlovskogo instituta travmatologii i ortopedii (dir. -
kand. med. nauk Z.P. Lubagina).

ROKITYANSKIY, Vladimir Ivanovich; LUKAMIN, Yu.S., red.; MANINA, M.P.,
~~tekhn. red.~~

[Hygiene for athletics; Hygienic and medical information for
the Ready for Work and Defence Organisation] Gigena fizkul'-
turnika; gigenicheskie i meditsinskie svedeniia v komplekse
GTO. Izd. 2-o, dop. i ispr. Moskva, Gos. izd-vo "Fizkul'tura
i sport," 1957. 144 p.
(HYGIENE) (MIRA 11:4)

KRYLOV, Nikolay Petrovich; ROKITYANSKIY, Vadim Ivanovich

[Ultrasonics and their therapeutic use] Ul'trasvuk i ego
lechebnoe primeneniye. Moskva, Medgiz, 1958. 242 p. (MIRA 12:3)
(ULTRASONIC WAVES--THERAPEUTIC USE)

ROKITANSKIY, V.I., kand. med. nauk.

Ultrasonics in combined therapy of injuries of the bursoligamental apparatus of the knee joint. Ortop. travm. protez., Moskva 18 no.6: 37-42 N-D '59. (MIRA 12:1)

1. Iz Tsentral'nogo instituta travmatologii i ortopedii (dir. - deystvitel'nyy chlen AMN SSSR prof. N.N. Priorov) i fizioterapevticheskogo otdeleniya (zav. - prof. Ye. I. Pasyukov) 1-y Gradskoy bol'nitsy g. Moskvy (Glavnyy vrach - zasluzh. vrach RSFSR Chernyshev).

(KNEE, wds. & inj.

bursoligamental appar., ultrasonics in combined ther. (B
(ULTRASONICS, ther. use

knee, inj. of bursoligamental appar., in combined ther.
(Bns))

ROKITYANSKIY, V.I. (Sverdlovsk)

Studies on the mechanism of therapeutic effects of ultrasonic oscillations in experimental joint injuries. Pat. fiziol. i eksp. terap. 6 no.4:79-80 J1-Ag '62. (MIRA 17:8)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta travmatologii i ortopedii Ministerstva zdravookhraneniya RSFSR.

ORZHESHKOVSKIY, V.V., starshiy nauchnyy sotrudnik; ROKITYANSKIY, V.I.,
starshiy nauchnyy sotrudnik

Compound use of ultrasound and sulfide (Matsesta) therapy in
Bekhterev's disease. Ortop., travm. i protez. 26 no. 10:
73-74 0 '65. (MIRA 18:12)

1. Iz Sochinskogo instituta kurortologii i fizioterapii (dir. -
zasluzhennyy vrach RSFSR N.Ye. Romanov). Adres avtorov: Sochi,
Kurortnyy prospekt, dom 110, Institut kurortologii i fizio-
terapii. Submitted Jan. 11, 1965.

KLEPIKOV, N.P.; ROKITYANSKIY, V.R.; RUDOY, Yu.G.; SAYEVSKIY, F.V.;
FEDOROV, V.V.; YUDIN, V.A.

Threshold singularities in the total cross section of pion
scattering by protons. Zhur.eksp.i teor.fiz. 41 no.3:937-938
S '61. (MIRA 14:10)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo
universiteta.

(Mesons--Scattering) (Protons)

KRYLOV, N.N., kand. tekhn. nauk, dotsent; ROKITYANSKIY, V.R., assistant

Curvature of surfaces of gear wheels with two bending parameters.
Trudy MIIT no. 190:180-187 '65.

(MIRA 18:8)

DESYATNIK, E.M., inzh., red.; YELISEYEVA, Ye.Ye., inzh., red.;
MURASHOV, A.G., inzh., red.; GUSEV, V.I., inzh., red.;
MALAKHOV, A.Ye., inzh., red.; PETROV, G.P., inzh., red.;
FILIMONOV, S.Ye., inzh., red.; ROKKO, M.A., inzh., red.;
ANDREYEV, L.N., inzh., red.; TURIANSKIY, M.A., inzh., red.;
ZERENKOV, A.D., inzh., red.

[Collections Nos. 10, 20, 31, and 42 of standard district
uniform estimates for construction work] Sborniki No. 10,
20, 31 i 42 edinykh raionnykh edinichnykh rastsenok na
stroitel'nye raboty. Moskva, Stroiizdat, 1965.

(NIA 18:10)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po de-
lam stroitel'stva. 2. Gosstroy SSSR (for Desyatnik, Gusev,
Filimonov). 3. Nauchno-issledovatel'skiy institut ekonomiki
stroitel'stva Gosstroya SSSR (for Yeliseyeva, Murashov,
Rokko, Andreyev, Malakhov, Turianskiy). 4. Gosudarstvennyy soyuz-
nyy institut po proyektirovaniyu spetsial'nykh sooruzheniy, zdaniy,
sanitarno-tekhnicheskikh i energeticheskikh ustroystv dlya predpri-
yatiy kaimicheskoy promyshlennosti (for Petrov). 5. ~~Sentral'nyy~~ Sentral'nyy
nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut
promyshlennykh zdaniy i sooruzheniy (for Zerenkov).

GIRMAN, Vladimir, MUDr.; ROKL, Jindrich, PhMr.

Opinion of hygienists on cleaning and disinfection of passenger cars.
Zel dop tech 10 no. 1:20-21 '62.

ROKNIC, Bojana; HORVAT-GRUBAC, Ana; PAVICEVIC, Radojka

Evaluation of tuberculous morbidity following BCG vaccination.
Tuberkuloza 15 no.1:5-20 Ja-Mr '63.

1. Decji dispanzer opstine Zvezdara, Beograd - Upravnik: dr.
Radojka Pavicevic.

(TUBERCULOSIS) (BCG VACCINATION)
(STATISTICS)

S

ROKOSSOWSKI, Z.

POLAND/Chemical Technology - Chemical Products and Their
Application. Industrial Organic Synthesis

I-1

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2158

Author : Rokossowski, Z.

Inst :

Title : The Putting in Operation of a Phthalic Anhydride Plant.

Orig Pub : Przem. chem., 1956, 12, No 8, 417-421

Abstract : An analysis of the putting in operation of the first industrial unit for the production of phthalic anhydride, in the Polish People's Republic. Processes of catalytic oxidation of naphthalene, distillation of the crude product, and safety engineering problems are considered.

Card 1/1

ROKOTYAN, Ye.S.

Investigating the standard blooming mill 1000 type designed by the
Central Machinery Design Office of the Central Scientific Research
Institute of Technology and Machinery Manufacture. [Trudy] TSNIIIT.
MASH 73:158-178 '55. (MIRA 11:3)

(Rolling mills)

ROLIA, S.

The tasks of the Public Roads Section of the Scientific and Technical Association of Communication Engineers and Technicians in 1957/58.

p. 248 (Drogownictwo. Vol. 12, no. 10 Oct. 1957. Warszawa, Poland)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

Rokityanskiy, V.I.

USSR/General Biology - General Histology.

B-3

Abs Jour : Ref Zhur - Biologiya, No 1, 1957, 180.

Author : V.I. Rokityanskiy

Inst :

Title : Experimental Therapy of the Extension of the Knee Joints by some Physical Factors. Report 3. The Effect of Repeated Novocainization of the Peripheral Nerves on the Processes of Regeneration (Without the Action of Physical Factors).

Orig Pub : Sb. Nauch, rabot Rzhsk, In-ta, 1954, 3, 165-175.

Abst : Following the extension of both knee joints, the animal was repeatedly (7 to 9 times in a period of 20 days) novocainized in both hips at a level of the upper third part areas (the author calls it novocainization of the peripheral nerves). As a result, an inconsiderably exhibited improvement in the blood supply to most of the joint tissues, a stimulation of the formation of young

Card 1/2

USSR/General Biology - General Histology.

B-3

Abs Jour : Ref Zhur - Biologiya, No 1, 1957, 180.

connective tissue cells, and the hastening of the resolution of the foci of hemorrhaging ~~was~~ noted. The negative effect of this procedure is edema of the joint capsule frequently accompanied by necrosis of separate sections of the joint's tissues.

Card 2/2

ROKK, E.Yu., inzhener.

Conference of efficiency promoters engaged in the food industry
in Estonia. Izobr.v SSSR 2 no.7:43-44 J1 '57. (MLRA 10:7)
(Estonia--Food industry)

[illegible]

ROKITZKAJA, M. S.

N. N. MELNIKOV, CR, 1941, 31, 123-124

MELNIKOV and **M. S. RODIMENKO** (*J. Gen. Chem., Russ.*, 1938, 8, 1768—1767; 1769—1770). —II. Excess of 0-1% Br in HBr is added to 0.05—0.5 g. of acetic acid in 50—150 ml. of H₂O at 0°, 5—10 ml. of 5% KI and 2 ml. of 5% NaCl are added after 2 hr., and the solution is titrated with 0-1% Na₂S₂O₃. The B content is calc. according to the equations: $\text{B(OH)}_3 + \text{Br}_2 + \text{H}_2\text{O} \rightarrow \text{RBr} + \text{HBr} + \text{H}_2\text{BO}_3$; $\text{B(OH)}_3 + 2\text{Br}_2 + 2\text{H}_2\text{O} \rightarrow 2\text{RBr} + 2\text{HBr} + \text{H}_2\text{BO}_3$.

III. 1:4: 2-C₆H₄-MeBr is added in eq. to H₂O, and the solution is added to B(OH)₃-OH in H₂O: 5-chloro-2-methylphenyl, m.p. 184—185°, and 5:5'-dichloro-2:2'-dimethyldiphenylboric acid, m.p. 81°, are thus obtained. The following are prepared analogously: 2-bromo-4-methyl, m.p. 157° from 1:3:4-C₆H₃MeBr, p-tolylphenyl, m.p. 100—111°, from p-C₆H₄EtBr, styryl, m.p. 124—141° from CHPh₂CBr, diphenylmethyl, m.p. 168—169°, and bis-diphenylmethyl, not melting at 300°, from C₆H₅FaBr, 5-bromo-2:4-dimethylphenyl, m.p. 243—251° from dibromo-

H_2BO_3 (R = 5-bromo-2:4-dimethylphenyl, X = Cl, decomp. 266°; X = Br, decomp. 250°; R = 5-chloro-2:4-dimethylphenyl, X = Cl, decomp. 248°; X = Br, decomp. 190-193°; R = 5-chloro-2-methylphenyl, X = Cl, decomp. 260°; X = Br, decomp. 290°; R = 5-chloro-3-methylphenyl, X = Cl, m.p. 211°; X = Br, m.p. 185°; R = 2-bromo-4-methylphenyl, X = Cl, m.p. 226°; X = Br, m.p. 253°; R = p-tolylphenyl, X = Cl, decomp. 260°; X = Br, decomp. 280°; R = *o*-tolyl, X = Br, m.p. 166°). The compounds TR_2X heated with eq. TiX_4 yield TRX_3 (R = 2-bromo-4-methylphenyl, X = Cl, m.p. 174-177°; R = p-tolylphenyl, X = Cl, decomp. 158°; R = 3-naphthyl, X = Cl, m.p. 144°; R = 5-bromo, m.p. 192°, or 5-chloro-2:4-dimethylphenyl, X = Br, m.p. 185-190°; R = 5-chloro-4-methylphenyl, X = Br, m.p. 185-190°).

$\text{O}_2\text{H}_2\text{Cl-CH}_2\text{Br}$. The α -hydroxy acids, $\text{CH}_2\text{OH-CH}_2\text{OH}$, $\text{CH}_2\text{OH-CH}_2\text{Br}$, $\text{CH}_2\text{OH-CH}_2\text{I}$, and $\text{CH}_2\text{OH-CH}_2\text{Cl}$ with TiCl_4 halides in H_2O , yield TiBr_4 , TiX_3 , and TiX_4 .

[illegible]

CIA-RDP86-00513R0014451

(1) AND (2) ARE
 PROCESSES AND PROPERTIES MADE

A3

BC

Organic compounds of mercury. V. Interaction of mercury
 chloride with mercury salts of telluric acids. N. N. Melnikov and
 M. S. Rukhovich (J. Gen. Chem. Russ., 1941, 11, 692-698).—Hg
 chloride does not react with Hg salts in any solvents (C₂H₆, 1934,
 11, 145), but in presence of small amounts of H₂O good yields of alkyl
 Hg salts are obtained. The following have been prepared (all yields
 in parentheses): (H₂TeO₄)₂Hg, melting 103° (80); (H₂TeO₃)₂Hg, m.p.
 174-180° (inert), (H₂TeO₃)₂Hg, m.p. 116° (80); (H₂TeO₃)₂Hg, m.p. 184-
 188° (75); H₂TeO₃·NO₂, m.p. 85-90° (80-85); (Hg₂TeO₃)₂Hg, m.p. 186°
 (80); (Hg₂TeO₃)₂Hg, m.p. 186° (80); (Hg₂TeO₃)₂Hg, m.p. 186° (80).
 U. S. R. K.

ASS-55A METALLURGICAL LITERATURE CLASSIFICATION

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<p>Mechanism of oxidation of organic compounds by selenium dioxide. V. Kinetics of oxidation of aldehydes. N. N. MAZUREK and M. S. KOKOTA. (J. Gen. Chem. Russ., 1969, 3, 1188-1191).</p> <p>The rates of the (bimol.) oxidation by SeO_2 in AcOH of MeCHO, EtCHO, PrCHO, Pr^iCHO, heptaldehyde, and Bu^tCHO have been examined at 20°. The rates fall with increasing mol. wt. and from the normal to the iso-compound, as would be expected if the rate of reaction is dependent on the degree of enolization of the aldehyde. G. A. R. K.</p>																																																																																																																																																																								
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<p>BC</p> <p>B-2-1</p> <p>Production of intermediate products of the type of "Gonos- one" N. N. Kabanov and M. A. Kabanova (From. U.S.S.R.). Chem. 1946, 9, 287. -- MgCl₂ is prepared according to: 2EtBr + Mg + Et₂O → MgEt₂ + 2EtBr (solvent EtOAc); MgEt₂ + MgCl₂ → Mg₂EtCl (solvent EtOH). N.T.</p>																			
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<p>15</p> <p>The phases in the vital process of the cellulose-decomposing microbe—<i>Spirichthys</i>—and its distribution in Ukrainian soils. A. I. Rohitskaya. <i>Podology</i> (U. S. S. R.) 20, 200-24 (1933).—R. deals primarily with the morphology of the micro-organism. One of the attributes of this organism is that it develops best in an alk. medium, but in forest soils it was found to withstand a pH of 5.8. In artificial media it withstood a pH of 5.4. The max. pH was found to be 8.5. J. S. Joffe</p>																			
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<p>Microflora of fermenting beet juice from a Soviet beet-sugar factory. A. I. ROZITSKIY AND A. P. VASEL'EV. Zh. Zashiti Tseluloz. Proiz. 26, 50-55 (1953).</p> <p>Two samples of decomp. beet juice were tested to det. the bacteria content, microflora and antiseptics which would prevent decomp. Most of the bacteria decomp. the sucrose with formation of acid + gas or only acid. These bacteria belong to 3 groups: strong aerobes, facultative anaerobes and thermophilic. Negl. cultures were very resistant to temp. and disinfecting agents as Sch. formalin and milk of lime. Formalin delayed the growth of cultures for about 4 days. R. and V. describe the detailed method of testing and results obtained.</p> <p style="text-align: right;">V. R. BAIKOV</p>																																																			
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<p>Microflora of fermenting beet juices from a Soviet beet-sugar factory. A. I. KONTSEVA and A. P. VASILYEV (Nauk. Zapiski Tsuk. Prom., 1932, 26, 59-60).—Most of the bacteria (aerobes, facultative anaerobes, and thermophiles) decomposed sucrose with the formation of acid alone or with gas. Cultures were very resistant to temp. and disinfectants. Ch. Ann.</p>																			
ASB.5LA METALLURGICAL LITERATURE CLASSIFICATION																			
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Utilization of microbial processes in paper industry. P. A. Marmulzhev. *Nam-ashnaya Prom.* 12, No. 6, 21-4 (1931).--M. discusses the initial results of Rokitzkaya's work on the extn. of free cellulose from straw by microorganisms of cow manure, and the industrial advantages of production of paper from cellulose obtained by microbial processes. **Preparation of cellulose from straw by microbial method.** A. J. Rokitzkaya. *Ibid.* 25 32.--Expts. in the sepn. of free cellulose from rye straw by selective microbial decompn. of lignin with various cultures are described. The following process gave the most conclusive results. Free cellulose was obtained by the action of enzymes of cow manure on disintegrated rye straw for 21-42 hrs. at 37°, trituration of the product with water in a mortar, filtering the pulp from the amorphous ppt. of decompd. lignin through a fine metal sieve and bleaching with a little $\text{Ca}(\text{OCl})_2$. The product is similar to chem. cellulose except that its white, long fibril-like fibers are covered with filamentous fibræ. The work is being continued. **Microbiological production of cellulose.** M. Rubinov. *Ibid.* 32-4. *Lanzites sepiaria*, *Trachas pini* and *Polyporus* are some of the varieties of fungi which in the nature destroy lumber and trees by decompg. the lignin, but not the cellulose, and are recommended for use in exptl. microbiol. pulping of wood for the production of paper. Chas. Blanc